IN THE CLAIMS

We claim:

1. A method of rinsing a wafer comprising:

spinning a wafer;

exposing said spinning wafer to DI water; and

after exposing said spinning wafer to DI water, exposing said spinning wafer to a liquid having a lower surface tension than water.

2. The method of claim 1 wherein said liquid is isopropyl alcohol (IPA).

3. The method of claim 1 further comprising apply acoustic waves to said wafer while exposing said wafer to DI water.

4. The method of claim 1 further comprising the step of heating said DI water to a temperature greater than room temperature prior to exposing said spinning wafer to said DI water.

5. The method of claim 1 wherein said wafer is spun at a rate between 50-1000 rpms while exposing said wafer to said DI water and to said liquid.

6. The method of claim 2 wherein the time of exposure to said liquid is less than time of exposure to said DI water.

7. A method of rinsing a wafer comprising:

spinning said wafer;

exposing said spinning wafer to DI water; and

after exposing said spinning wafer to said DI water, exposing said spinning wafer to the vapor of a solution having a lower surface tension than water.

8. The method of claim 7 wherein said solution is isopropyl alcohol (IPA).

9. The method of claim 7 further comprising apply acoustic waves to said wafer while exposing said wafer to DI water.

10. The method of claim 7 further comprising the step of heating said DI water to a temperature greater than room temperature prior to exposing said spinning wafer to said DI water.

11. The method of claim 7 wherein said wafer is spun at a rate between 50-1000 rpm while exposing said wafer to said DI water and to said liquid.

12. The method of claim 7 wherein the time of exposure to said vapor is less than time of exposure to said DI water.

13. A method of rinsing a wafer comprising:

spinning a wafer;

exposing said spinning wafer to DI water; and

after exposing said spinning wafer to DI water, blowing a gas at the center of said wafer while said wafer is spinning.

14. The method of claim 13 wherein said gas is nitrogen (N_2).

15. The method of claim 13 further comprising applying acoustic waves to said wafer while exposing said wafer to said DI water.

16. The method of claim 13 wherein said DI water is heated to a temperature above room temperature prior to exposing said wafer to said DI water.

17. A method of rinsing a wafer comprising:

spinning a wafer;

exposing said spinning wafer to DI water; and

while exposing said spinning wafer to DI water, applying acoustic waves to said spinning wafer.

18. The method of claim 17 wherein said acoustic waves have a frequency in the range between 400 kHz and 8 MHz.

19. The method of claim 17 further comprising the step of after exposing said wafer to said DI water exposing said spinning wafer to a liquid having a lower surface tension than water.

20. The method of claim 17 wherein said DI water is heated to a temperature greater than room temperature.

21. A method of rinsing a wafer comprising:

spinning said wafer;

exposing said spinning wafer to DI water which has been heated to a temperature greater than room temperature.

22. The method of claim 21 wherein said DI water is heated to a temperature between 60-70°C.

23. The method of claim 21 further comprising applying acoustic waves to said wafer while exposing said wafer to said heated DI water.

24. The method of claim 21 further comprising after exposing said spinning wafer to said heated DI water, exposing said spinning wafer to a liquid having a lower surface tension than water.

25. A method of rinsing a wafer comprising:

spinning said wafer;

exposing said spinning wafer to DI water heated to a temperature greater than room temperature;

while exposing said spinning wafer to said heated DI water, applying acoustic waves to said spinning wafer; and

after exposing said spinning wafer to said heated DI water, exposing said wafer to a liquid having lower surface tension than water.

26. A method of cleaning a wafer comprising:

spinning a wafer at a first rotation rate;

exposing said spinning wafer to an etchant or cleaning chemicals;

rinsing said cleaning chemicals or said etchant from said wafer with a rinsing method comprising:

spinning said wafer at a second rotation rate;

dispensing DI water onto said spinning wafer; and

exposing said spinning wafer to a vapor or liquid having a lower surface tension than water; and

after rinsing said wafer, drying said wafer by spinning said wafer at a third rotation rate.

27. The method of claim 26 wherein said third rotation rate is faster than said second rotation rate.

28. The method of claim 27 wherein said second rotation rate is between 50-1000 rpm and said third rotation rate is between 500-2000 rpm.

29. The method of claim 26 wherein said liquid or vapor is isopropyl alcohol.

30. The method of claim 26 wherein said rinsing method further comprises applying acoustic waves to said wafer while dispensing DI water on said wafer.

31. The method of claim 26 wherein said DI water is heated to a temperature greater than room temperature prior to dispensing said DI water on said spinning wafer.

32. A method of cleaning a wafer comprising:

spinning a wafer;

exposing said spinning wafer to an etchant or cleaning chemicals;

prior to dispensing DI water on said etchant or cleaning chemical covered wafer exposing said spinning wafer to a liquid or vapor having a lower surface tension than water.

33. A method of cleaning a wafer comprising:

spinning said wafer;

exposing said spinning wafer to an etchant or a cleaning chemical; and

rinsing said etchant or cleaning chemical from said wafer by simultaneously dispensing DI water on said spinning wafer and exposing said spinning wafer to a liquid or vapor having a lower surface tension than water.